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| 09/873,714 | 06/04/2001 | Morenike Awokola | FA1002 US NA | 4978 |
| 23906 | 7590 | 06/22/2005 | EXAMINER | |
| E I DU PONT DE NEMOURS AND COMPANY LEGAL PATENT RECORDS CENTER BARLEY MILL PLAZA 25/1128 4417 LANCASTER PIKE WILMINGTON, DE 19805 | | | TSOY, ELENA | |
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| | | | 1762 | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/873,714

Applicant(s)

AWOKOLA ET AL.

Examiner

Elena Tsoy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/13/2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6,8,10 and 13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6,8,10 and 13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on June 13, 2005 has been entered.

Response to Amendment

2. Amendment filed on June 13, 2005 has been entered. Claims 4-5, 7, 9, 11-12 have been cancelled. Claims 1-3, 6, 8, 10, 13 are pending in the application.

Claim Objections

3. Objection to claim 9 under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim has been withdrawn due to cancellation of the claim.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claim 10 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 10, line 1, "The process of claim 9" renders the claim indefinite because it recites cancelled claim 9. For examining purposes the phrase was interpreted as "The process of claim 9 1".

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-3, 6, 10, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Maag et al (DE-A-197 57 082 or WO 99/26733) in view of Richard (US 5,091,211).

The Examiner Note: since DE-A-197 57 082 and WO 99/26733 (in German language) and US 6,531,188 are of the same patent family, the Examiner will refer to English text of US 6,531,188 to Maag et al.

Applicants admitted in Description of Related Art of the specification as filed that DE-A-197 57 082 discloses a multilayer coating process, in which the filler coating composition used comprises either solely binders curable by free-radical and/or cationic polymerization, or binders curable by free-radical and/or cationic polymerization and *further chemically crosslinking binders*. Curing proceeds by means of high energy radiation. See specification, page 1, lines 26-30.

Maag et al disclose all steps recited in claim 1 such as: a) applying to *optionally* pre-coated metal or plastic surface (See column 2, lines 11-15) a surfacer (filler) coating composition for automotive repair lacquering (See column 5, lines 29, 37) comprising solvent-free composition having 100 % solids content comprising (See column 2, lines 47-49) as a binder a prepolymer

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having molecular mass of **200**-10,000 and containing on average **2** to 20 olefinic double bonds per molecule (claimed component A) such as polyurethane methacrylates (See column 3, lines 1-12) and 1 to 50 wt. % of a reactive monosaturated diluent (claimed component B), e.g. esters of methacrylic acid (i.e. a *liquid* filler coating composition) (See column 3, lines 13-20) such as cycloaliphatic (meth)acrylates (reactive polymerizable liquid monomer, i.e. diluent) (See column 3, lines 8-9), and a chemically crosslinking binder (See column 4, lines 29-40), b) curing the applied surfacer coating composition by irradiation with high energy radiation (See column 2, lines 40-49); c) applying a top coat layer comprising a color-imparting and/or special-effect-imparting base lacquer layer and a transparent clear lacquer layer, or a top coating comprising a pigmented one-layer top lacquer (See column 2, lines 17-18) to the cured spacer (filler) layer and curing the top coat layer (See column 7, lines 62-65).

The Examiner's Note: cycloaliphatic (meth)acrylate is an ester of cycloaliphatic alcohol and methacrylic acid. In other words, cycloaliphatic (meth)acrylate is a reaction product of cycloaliphatic alcohol and methacrylic acid.

Maag et al fail to teach that the surfacer (filler) coating composition comprises at least one compound having at least one phosphoric acid group and at least one free-radically polymerizable double bond (Claim 1) such as methacryloyl-modified phosphoric acid derivative (Claim 10) in an amount of 2-10 wt. % (Claim 1).

Richard teaches that addition of a compound having phosphoric acid group and a double bond such as monoester or diester of phosphoric acid having acryloyl or methacryloyl groups (See column 2, lines 10-15, 37) to a radiation curable coating composition comprising acrylourethane (polyurethane acrylate) and reactive free-radical polymerizable monomers (See column 1, lines 45-50) provides strong adhesive bond of the coating to a metal substrate (See column 1, lines 57-

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58). The amount of the monoester or diester of phosphoric acid included in the coating composition will vary depending principally upon the particular monoester or diester selected but will always be an effective amount sufficient to improve the bonding strength of the composition (See column 2, lines 54-59). Generally, this amount falls in the range of 0.5 to 10% by weight of the total coating composition (See column 2, lines 59-61).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a compound having phosphoric acid group and a double bond such as monoester or diester of phosphoric acid having acryloyl or methacryloyl groups in an amount of 0.5 to 10 wt % to a radiation curable surfacer coating composition of Maag et al with the expectation of providing the surfacer coating composition with the desired strong adhesive bond of the coating to a metal substrate, as taught by Richard.

It is the Examiner's position that the surfacer coating composition of Maag et al in view of Richard would produce no edge marks. It is held that where the claimed and prior art products are produced by identical or substantially identical processes, *claimed properties or functions are presumed to be inherent*. See MPEP 2111.02, 2112.01. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

8. **Claim 8** is rejected under 35 U.S.C. 103(a) as being unpatentable over Maag et al in view of Richard, further in view of Brehm et al (US 5,596,043).

Maag et al in view of Richard, as applied above, fails to teach that cycloaliphatic alcohols include isobornyl methacrylate.

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Brehm et al teach that monofunctional reactive thinners, such as isobornyl methacrylate (See column 5, line 59) may be used in combination with acrylic prepolymers (See column 4, lines 5-13) in a radiation curable coating composition (See column 7, lines 14-25) for coating automobile parts (See column 6, lines 33-35, 42) to provide good flow properties of the coating composition and thereby good processibility (See column 5, lines 50-53).

It is held that the selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 325 U.S. 327, 65 USPQ 297 (1945). See also *In re Leshin*, 227 F.2d 197, 125 USPQ 416 (CCPA 1960) (selection of a known plastic to make a container of a type made of plastics prior to the invention was held to be obvious); *Ryco, Inc. v. Ag-Bag Corp.*, 857 F.2d 1418, 8 USPQ2d 1323 (Fed. Cir. 1988).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used methacrylates of cycloaliphatic alcohols such as isobornyl methacrylate as methacrylatereactive thinner in Maag et al in view of Richard for the use in automotive coatings since Brehm et al teach that monofunctional reactive thinners, such as isobornyl methacrylate is suitable for the use in a radiation curable coating composition in combination with acrylic prepolymers.

Response to Arguments

9. Applicants' arguments filed June 13, 2005 have been fully considered but they are not persuasive.

(A) Applicants state that the Examiner indicated in the Advisory Action that "the proposed amendment introduces new critical concentration ranges, that would require further search and consideration since they were not searched and addressed in the Final Office Action

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mailed on January 13, 2005." (emphasis in original).

The Examiner stated in the Office Actions that concentration limitations would be obvious **absent a showing of criticality**. Since according to the Applicants, the proposed amendment introducing new concentration ranges would place the application in condition for allowance, the Examiner assumed that the new concentration ranges are critical. However, upon thorough examination of the Application, neither specification, nor additional data show any evidence of criticality of the new ranges.

(B) Applicants argue that Applicants believe that Maag et al. is completely devoid of a single teaching that would lead a person of ordinary skill in the art to refer to the vinyl floor coating of Richard to invent a primer filler coating process that results in a primer filler layer having improved adhesion and exhibiting no edge marks upon being overcoated while still having good processability. Therefore, Applicants respectfully reiterate their request that the Examiner identify the teachings) in Maag et al. that would have led a person of ordinary skill in the art to look to the vinyl floor coating of Richard. Furthermore, Applicants wish to reiterate that the Examiner's primary reference Maag et al. was identified by Applicants at page 1, lines 26-30; however, Applicants explain at page 1, lines 32-34, that known filler coating compositions (including the filler coating compositions of Maag et al.) "exhibit . . . several disadvantages, in particular if they are to be formulated and used as priming fillers." Applicants further explain at page 1, line 37 to page 2, line 2 that "UV curable priming fillers still exhibit inadequate adhesion onto metal substrates, such as, aluminum, steel and zinc", and that "edge marks may occur on overcoating with further coating layers and the coating compositions exhibit deficiencies with regard to stability and/or flow." Applicants then expressly indicate at page 2, lines 3-10 that

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"this invention provides a process . . . that makes it possible to apply filler coating compositions curable by means of high energy radiation that yield coatings with excellent adhesion to the substrate . . . while retaining good processing characteristics", and produce filler layers that when "overcoated, no edge marks should occur."

The Examiner respectfully disagrees with this argument. Maag et al clearly teach that their surfacer coating composition may be used for automotive repair lacquering (See column 5, lines 29, 37). The surfacer composition of Maag et al in view of Richard has components in amounts within claimed ranges. Therefore, the surfacer coating composition of Maag et al should be expected not to produce edge marks. It is held that where the claimed and prior art products are produced by identical or substantially identical processes, claimed properties or functions are presumed to be inherent. See MPEP 2111.02, 2112.01. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

As to applying Richard, one of ordinary skill in the art at would have motivation in using the teaching of Richard so as to provide the surfacer coating composition with the desired strong adhesive bond of the coating to a metal substrate. One of ordinary skill in the art at would have reasonable expectation of success in using the teaching of Richard since Richard teaches that a compound having phosphoric acid group and a double bond such as monoester or diester of phosphoric acid having acryloyl or methacryloyl groups (See column 2, lines 10-15, 37) can be added to a radiation curable coating composition comprising acrylourethane (*polyurethane acrylate*) and *reactive free-radical polymerizable monomers* (See column 1, lines 45-50), and a coating composition of Maag et al is a radiation curable coating composition comprising as a

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binder *polyurethane methacrylates* (See column 3, lines 1-12) and *reactive free-radical polymerizable monomers* (See column 3, lines 8-9).

(C) Applicants state that Applicants have determined that the lack of edge marks at the point of contact between the OEM coating and the repair coating are unexpected or surprising results. This unexpected result was found when components A and B were within the stated ranges in amended claim 1, such that there were no visible internal or external edge marks. As evidence of such a finding, please refer to Examples 1, 2, and 3 as well as the "Presentation of coating results," wherein a damaged OEM coating (coated onto sheet steel) was repaired such that the coating was sanded back to the steel substrate and when repaired, it exhibited no internal or external edge marks. Outside of the defined ranges for components A and B, however, it would be difficult to avoid the presence of edge marks on overcoating with topcoats while maintaining a balance between satisfactory flow and good stability. For example, in the instance where component B would be decreased below the lower limit of 40%, and therefore, component A is increased to an amount above 60%, adhesion problems would result between the substrate and the repair coating. It would also lead to reduced sandability, thereby resulting in edge marks when overcoating with topcoats. Moreover, another consequence would be a decrease in its flow capabilities, wherein the balanced properties of the present invention would be compromised. Neither Maag et al. nor Richard disclose the unexpected advantage cited herein or the ranges utilized with the present invention as set forth in the amended claims.

First of all, the surfacer composition of Maag et al in view of Richard has components in amounts within claimed ranges. Secondly, Applicants have no example or any other evidence showing results of outside of the defined ranges for components A and B to prove *unexpected* results of claimed ranges.

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Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy whose telephone number is (571) 272-1429. The examiner can normally be reached on Mo-Thur. 9:00-7:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-141523. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ELENA TSOY
PRIMARY EXAMINER
ETsoy

Elena Tsoy
Primary Examiner
Art Unit 1762

June 20, 2005